WHAT IS CLAIMED IS:

1. A data communication apparatus, comprising:

(a) communication means having a first mode of transmitting information data isochronously with a predetermined communication cycle and a second mode of transmitting information data asynchronously with the predetermined communication cycle;

(b) encoding means for encoding the information data by a predetermined encoding method; and

(c) control means for controlling said communication means so as to transmit encoded information data when the encoding method corresponds to a decoding method at an object node apparatus and to transmit non-encoded information data when the encoding method does not correspond to the decoding method at the object node apparatus.

2. A data communication apparatus according to claim 1, wherein said control means controls so as to transmit information data encoded by using the first or second mode, when the encoding method corresponds to the decoding method at the object node apparatus.

3. A data communication apparatus according to claim 2, wherein said control means controls so as to transmit by using the first mode when the information data is moving image data.

4. A data communication apparatus according to claim 1, wherein said control means controls so as to transmit information data encoded by using the first or second mode, when the encoding method does not correspond to the decoding method at the object node apparatus.

5. A data communication apparatus according to claim 4, wherein said control means controls so as to transmit by using the second mode when the information data is still image data.

6. A data communication apparatus according to claim 1, wherein said communication means transmits the information data to the object node apparatus via a data bus.

7. A data communication apparatus according to claim 1, wherein communication using the first mode and communication using the second mode can be mixed in the communication cycle.

8. A data communication apparatus according to claim 1, wherein the first mode has a higher priority over the second mode in the communication cycle.

9. A data communication apparatus according to

claim 1, wherein the first mode is in conformity with an isochronous transmission mode of IEEE 1394 specifications, and the second mode is in conformity with an asynchronous transmission mode of IEEE 1394 specifications.

10. A data communication apparatus according to claim 1, wherein the non-encoded information data includes information data once encoded and thereafter decoded.

11. A data communication apparatus according to claim 1, wherein the information data contains moving image data or still image data.

12. A data communication apparatus according to claim 1, wherein the data communication apparatus is a digital video camera equipped with an image pickup unit for generating digital image information from an optical image of a subject.

13. A data communication apparatus according to claim 1, wherein the data communication apparatus is a video recorder for recording image information encoded by said encoding means in a predetermined storage medium.

14. A data communication apparatus, comprising:

(a) communication means having a first mode of communication isochronous with a predetermined communication cycle and a second mode of communication asynchronous with the communication cycle;

(b) encoding means for encoding image information in accordance with a decoding performance at an object node apparatus, the image information including moving image information and still image information; and

(c) control means for controlling said communication means so as to transmit the moving image information by using the first mode and to transmit the still image information by using the second mode.

15. A data communication apparatus according to claim 14, wherein said control means controls said communication means transmits the still image information by using the first mode when a plurality set of still image information are sequentially transmitted.

16. A data communication apparatus according to claim 14, wherein the still image information is contained in the moving image information.

17. A data communication apparatus according to claim 14, wherein the data communication apparatus is a

digital video camera equipped with an image pickup unit for generating digital image information from an optical image of a subject.

18. A data communication apparatus according to claim 14, wherein the data communication apparatus is a video recorder for recording image information encoded by said encoding means in a predetermined storage medium.

19. A data communication apparatus, comprising:

(a) input means for inputting moving image information and still image information;

(b) encoding means for encoding the moving image information and the still image information; and

(c) transmitting means for transmitting the moving image to a number of unidentified apparatuses and transmitting the still image information to a designated apparatus.

20. A data communication apparatus according to claim 19, wherein said transmitting means transmits the moving image information by using a transmission bandwidth assigned to each predetermined communication cycle and transmitting the still image information by using an idle bandwidth of the communication cycle.

21. A data communication apparatus according to claim 19, wherein said encoding means encodes the moving image information and the still image information by using an encoding performance corresponding to a decoding method at an object node apparatus.

22. A data communication apparatus, comprising:

(a) input means for inputting information data;

(b) encoding means for encoding the information data; and

(c) transmitting means for transmitting decode information containing program codes realizing the decoding method corresponding to an encoding method to be used by said encoding means and transmitting the information data encoded by said encoding means.

23. A data communication apparatus according to claim 22, wherein the decode information contains control data for inhibiting to use the program codes under predetermined conditions.

24. A data communication apparatus according to claim 22, wherein the information data includes image data.

25. A data communication apparatus, comprising:

(a) input means for inputting encoded information data and decode information realizing a decoding process for the information data; and

(b) decoding means for decoding the encoded information data by using the decode information.

26. A data communication apparatus, comprising:

(a) encoding means for encoding information data by using a predetermined encoding method;

(b) decoding means for decoding information data encoded by said encoding means; and

(c) selecting means for selecting an output of either said encoding means or sad decoding means in accordance with whether the encoding method corresponds to a decoding method at an object node apparatus.

27. A data communication method, comprising the steps of:

(a) encoding information data by a predetermined encoding method;

(b) transmitting encoded information data isochronously with a predetermined communication cycle when the encoding method corresponds to a decoding method at an object node apparatus; and

(c) transmitting non-encoded information data asynchronously with the communication cycle when the encoding method does not correspond to the decoding

method at the object node apparatus.

28. A data communication method, comprising the steps of:

(a) encoding image information in accordance with a decoding performance at an object node apparatus, the image information including moving image information and still image information;

(b) transmitting the moving image information by using a communication scheme isochronous with a predetermined communication cycle; and

(c) transmitting the still image by the communication scheme isochronous with the communication cycle or by a communication scheme asynchronous with the communication cycle.

29. A data communication method, comprising the steps of:

(a) inputting moving image information and still image information;

(b) encoding the moving image information and the still image information; and

(c) transmitting the moving image to a number of unidentified apparatuses and transmitting the still image information to a designated apparatus.

30. A data communication method, comprising the

steps of:

(a) inputting information data;

(b) encoding the information data; and

(c) transmitting decode information containing program codes realizing the decoding method corresponding to an encoding method to be used at said encoding step and transmitting the information data encoded at said encoding step.

31. A data communication method, comprising the steps of:

(a) inputting encoded information data and decode information realizing a decoding process for the information data; and

(b) decoding the encoded information data by using the decode information.

32. A data communication method, comprising the steps of:

(a) encoding information data by using a predetermined encoding scheme;

(b) decoding information data encoded at said encoding step; and

(c) selecting an output of either the encoded information data or the decoded information data in accordance with whether the encoding scheme corresponds to a decoding scheme at an object node apparatus.

33. A data communication system having a first mode of transmitting information data isochronously with a predetermined communication cycle and a second mode of transmitting information data asynchronously with the predetermined communication cycle, wherein encoded information data is transmitted when a predetermined encoding scheme corresponds to a decoding scheme at an object node apparatus and non-encoded information data is transmitted when the encoding scheme does not correspond to the decoding scheme at the object node apparatus.

34. A data communication system having a first mode of communication isochronous with a predetermined communication cycle and a second mode of communication asynchronous with the communication cycle, wherein moving image information encoded in accordance with a decoding performance at an object node apparatus is transmitted by using the first mode and still image information encoded in accordance with the decoding performance at the object node apparatus is transmitted by using the first or second mode.

35. A data communication system, comprising:

(a) a transmission apparatus for transmitting decode information containing program codes realizing a decoding method corresponding to a predetermined

encoding method and transmitting information data encoded by using the encoding method; and

(b) a reception apparatus for receiving the decode information and the information data and decoding the information data by using the decode information.

36. A program for a data communication process stored in a computer readable storage medium, comprising the steps of:

(a) encoding information data by a predetermined encoding method;

(b) transmitting encoded information data isochronously with a predetermined communication cycle when the encoding method corresponds to a decoding method at an object node apparatus; and

(c) transmitting non-encoded information data asynchronously with the communication cycle when the encoding method does not correspond to the decoding method at the object node apparatus.

37. A program for a data communication process stored in a computer readable storage medium, comprising the steps of:

(a) encoding image information in accordance with a decoding performance at an object node apparatus, the image information including moving image information and still image information;

(b) transmitting the moving image information by using a communication scheme isochronous with a predetermined communication cycle; and

(c) transmitting the still image by the communication scheme isochronous with the communication cycle or by a communication scheme asynchronous with the communication cycle.

38. A program for a data communication process stored in a computer readable storage medium, comprising the steps of:

(a) inputting moving image information and still image information;

(b) encoding the moving image information and the still image information; and

(c) transmitting the moving image to a number of unidentified apparatuses and transmitting the still image information to a designated apparatus.

39. A program for a data communication process stored in a computer readable storage medium, comprising the steps of:

(a) inputting information data;

(b) encoding the information data; and

(c) transmitting decode information containing program codes realizing the decoding method corresponding to an encoding method to be used at said

encoding step and transmitting the information data encoded at said encoding step.

40. A program for a data communication process stored in a computer readable storage medium, comprising the steps of:

(a) inputting encoded information data and decode information realizing a decoding process for the information data; and

(b) decoding the encoded information data by using the decode information.

41. A program for a data communication process stored in a computer readable storage medium, comprising the steps of:

(a) encoding information data by using a predetermined encoding scheme;

(b) decoding information data encoded at said encoding step; and

(c) selecting an output of either the encoded information data or the decoded information data in accordance with whether the encoding scheme corresponds to a decoding scheme at an object node apparatus.